

Listing of Claims

This listing of claims replaces all prior versions, and listings, of claims in the application:

Claims 1-11. (Canceled)

12. (Currently Amended) A phase shift mask comprising:
a plurality of features regions having different step
heights;

a first plurality of boundaries continuous sloped phase
edge between first adjacent features in said plurality of
features regions having different step heights, at least a
plurality of said boundaries comprising a continuous sloped
phase edge, wherein the first continuous sloped phase edge
spans a first lateral distance between the first adjacent
regions; and

a second continuous sloped phase edge between second
adjacent regions having different step heights, wherein the
second continuous sloped phase edge spans a second lateral
distance between the second adjacent regions.

13. (Currently Amended) The phase shift mask of claim 12,
wherein:

the phase shift mask is adapted to ~~be exposed~~ expose a
substrate with using light electromagnetic radiation having a
wavelength[[],]; and

wherein a plurality of the boundaries have a continuous
sloped edge with a first lateral distance, the first lateral
distance being is approximately on the order of said wavelength.

14. (Currently Amended) The phase shift mask of claim
[[13]] 12, wherein the phase shift mask further comprises:

~~another plurality of the boundaries have a third continuous
sloped phase edge between third adjacent regions having
different step heights, wherein the third continuous sloped
phase edge spans with a second third lateral distance between
the third adjacent regions.~~

15. (Currently Amended) The phase shift mask of claim
[[14]] 12, wherein the first continuous sloped edges phase edge
~~having the first lateral distance are is~~ perpendicular to the
second continuous sloped edges phase edge ~~having the second~~
~~lateral distance.~~

16. (Currently Amended) The phase shift mask of claim 12,
wherein the phase shift mask comprises a ~~trimless~~ transmission
phase shift mask.

17. (Currently Amended) A method comprising:

exposing a substrate using a phase shift mask including
that comprises a pattern comprising a plurality of features
regions having different step heights, and a plurality of
boundaries first continuous sloped phase edge between first
adjacent features in said plurality of features regions having
different step heights, and at least a plurality of said
boundaries comprising a second continuous sloped phase edge
between second adjacent regions having different step heights,
and to imaging image the pattern onto a layer of resist material
on a wafer the substrate,

wherein the first continuous sloped phase edge spans a
first lateral distance between the first adjacent regions and
the second continuous sloped phase edge spans a second lateral
distance between the second adjacent regions.

18. (Original) The method of claim 17, further comprising:

developing the resist material without a second exposure.

19. (Original) The method of claim 18, wherein the second exposure comprises a trim mask exposure.

20. (Currently Amended) The method of claim 17, wherein:
said exposing comprises exposing the substrate with using
light electromagnetic radiation having a wavelength[[],] ; and
wherein a plurality of said boundaries have a the first
lateral distance is approximately on the order of the
wavelength.

21. (Currently Amended) The method of claim 17, wherein:
the features regions having different step heights
~~comprises comprise~~ clear phase shift regions, and
wherein the boundaries are between adjacent phase shift
regions.

22. (Canceled)

23. (New) The phase shift mask of claim 12, wherein the
plurality of regions comprises a plurality of clear regions.

24. (New) The phase shift mask of claim 12, wherein the
first adjacent regions having different step heights comprise
adjacent 0 and π regions.

25. (New) The phase shift mask of claim 12, wherein:
the first lateral distance is dimensioned to avoid phase
conflict between the first adjacent regions; and
the second lateral distance is dimensioned to avoid phase
conflict between the second adjacent regions.

26. (New) The method of claim 17, wherein the first adjacent regions having different step heights comprise adjacent 0 and π regions.

27. (New) The method of claim 17, wherein exposing the substrate using the phase shift mask comprises shifting a phase of light transmitted through the phase shift mask.

28. (New) The method of claim 17, wherein:
the first lateral distance is dimensioned to avoid phase conflict between the first adjacent regions; and
the second lateral distance is dimensioned to avoid phase conflict between the second adjacent regions.